Comment Summary	Response
General 1. We recommend that BLM use the ARMS update to set forth the procedures necessary to ensure compliance with the federal and state air quality standards statewide. 2. The Draft 2018 Update fails to even mention the recent nonattainment area designation in the Uinta Basin. The final ARMS must address this important air quality management issue and remedy BLM's failure to provide for compliance with this public health standard. BLM also should ensure that the ARMS provides adequate processes and protections against any future violations of other federal and state standards as a result of BLM activities. 3. BLM should add a commitment in the 2018 ARMS update to manage the pace, location, and intensity of development – as needed – in order to attain air quality standards 4. As the Settlement Agreement makes clear, the ARMS constitute non-binding policy guidance. Such guidance can outline a strategy in the interest of clarity and consistency, but cannot replace or contradict statutory or regulatory authority with force and effect of law. Further, to the extent BLM has responsibility for air quality management, the focus of that effort is in management of oil/gas resources. Other resources, including recreation, present minimal potential to meaningfully affect air quality. The ARMS and future planning efforts should acknowledge this context and be designed accordingly. 5. We recommend that the ARMS focus on outlining a general framework for considering air quality, clarify the relevant goal is to identify project-specific impacts to air quality, and emphasize best management practices or conditions of approval designed to mitigate or avoid air quality impacts for the specific project in question. For example, the "objectives" (ARMS p. 2) include the phrase "bring about the best	1. Comment noted 2. Federal agency procedures on addressing activities in nonattainment areas is codified in the Clean Air Act under General Conformity requirements. The BLM complies with these regulations, including complying with public health standards and with appropriate protections against any future violations of other federal and state standards as a result of BLM activities. A description about complying with CAA conformity requirements for nonattainment areas has been added to the ARMS document. Mention of specific non-attainment areas is not appropriate in a general guidance document. 3. These items are beyond the scope of the air resource strategy. The BLM analyzes pace, location, and intensity of development as part of a comprehensive NEPA analysis. Associated activities will be managed consistent with existing authority and recognize state and EPA primacy in regulating air quality on lands managed by the BLM. 4. The non-binding policy guidance disclaimer at the end of the ARMS guidance states this clearly. The ARMS guidance does not make pre-analysis generalizations about potential air impacts from non-oil and gas

achievable air quality within BLM lands and Utah in general." This is an ambitious and impractical statement, subject to "eye of beholder" interpretation that BLM will almost assuredly fail to achieve, at least in the eye of some special interest. A better phrasing might be to "consider and disclose management actions that might potentially result in significant adverse effects to air quality, and, where appropriate and feasible, describe actions which avoid or mitigate those effects." 6. Page 7- we agree with the observation that analysis "by definition is action-specific and each analysis is unique to the specific set of issues associated with the action." This begs the question of whether the ARMS or similar guidance is creating more problems than it might be solving.	projects. It is intended to provide guidance on non-oil and gas projects as appropriate. While ARMS focuses on oil and gas development it does not exclude air analysis for other activities. 5. This is the intent of the ARMS guidance, and the language will be reviewed to make sure that intent is accurately reflected in the guidance. Objectives are goals, and not requirements. Alleged failure to meet a stated objective is not non-compliance with any rule, regulation, or policy of BLM. 6. The ARMS is intended to provide general guidance both to BLM staff in Utah, and to the general public in Utah, on how BLM approaches air quality analysis. Public review of general agency guidance provides an opportunity for the agency to explain its procedures in advance of the guidance being applied to a specific situation.
ARMS Objective 1. Page 2- ARMS Objectives- we recommend these be softened or qualified. In particular the "best achievable" language in bulleted goal 3 seems ripe for abuse. As stated above, we recommend alternative language that might focus on new and "significant adverse effects."	1. Comment notes. Update ARMS objectives.
Air Resource Management 1. Page 2 – first box, consider changing "manage" to "protect" 2. Page 2, second box, first bullet, first part of the sentence, consider updating from "BLM managed lands" to "BLM managed activities"	1-3. Comments noted. Update ARMS objectives. The BLM is a "management" agency not a "protection" agency. An objective of this document is to better inform decision makers of air resource

3. Page 3, first topic (Airshed Management)…we are really not the managers but more in the business of protecting the air resource with respect to our actions 4. BLM has failed to demonstrate that such back-end controls will be sufficient to remedy air quality problems in the Uinta Basin or prevent them from occurring in other parts of the state. Accordingly, through the ARMS BLM must articulate necessary steps to provide for compliance with the national ambient air quality standards (NAAQS) statewide. 5. Page 3- Airshed Management- the trans-jurisdictional concept of "airshed management" raises practical concerns. We generally support the content and tone of this introductory discussion that the focus should be on "potential effects" of specific projects/actions, and that management response "may take the form of lease stipulations, conditions of approval, best management practices and/or applicant committed measures…."	impacts and alternative mitigation scenarios that may reduce air quality issues on BLM managed lands. BLM decision makers have a wide range of discretion and may choose all, some or no mitigation, depending upon the goals to be achieved by the proposed activity. 4. BLM may only provide for compliance with federal and state environmental laws, thus BLM will defer to the appropriate regulatory agencies on how to address nonattainment as per the General Conformity regulations of the Clean Air Act. The BLM relies on the regulatory agency responsible to determine how air quality controls related to operations BLM manages complies with relevant NAAQS or CAA requirements. 5. Comment noted. Cross-jurisdictional air pollution control is a difficult issue to address. The EPA, affected states, and tribes are the appropriate agencies to address the cross-jurisdiction air quality issue. The BLM will rely on these agencies to address this. In addition the AiRTAG group can be utilized to engage applicable agencies to discuss multi-jurisdiction airshed management.
Cumulative impacts of small projects 1. Page 3, first topic (Airshed Management)…might want to consider adding some language about the potential concern of many small projects (single APDs, etc.) that individually do not significantly impact air quality but many small projects within an airshed potentially add up to be an overall significance contribution.	1. Edit made. This suggestion helps to clarify why the BLM does cumulative modeling. 2. Comment noted. Additional information about the Uinta Basin regional monitoring can be found by referencing the modeling

2. Pages 3-5- Uinta Basin Regional Monitoring- the discussion, to the extent we can understand it, foreshadows multiple challenges and concerns, as discussed above. It appears that increasing population and related affects will create a counter-weight against which BLM's most fervent management efforts will be relatively meaningless.	report on the BLM Utah Air Program webpage.
ARMS 2014 Modeling 1. Page 3, bottom…were the additional emissions controls only applied to Federal O&G emissions sources for the original ARMS modeling? 2. Page 4…were Federal versus non-Federal impact contributions determined for the original ARMS modeling? 3. DAQ recommends that the BLM add a brief summary of the modeling results to the text to assist the reader in understanding the policy position. 4. DAQ concurs with the BLM that the modeling over-estimates the PM2.5 as evident by monitoring data that does not show a violation of the National Ambient Air Quality Standards (NAAQS). DAQ suggests that the last paragraph on page 4 include a statement that monitoring data verifies that no PM2.5 exceeds have occurred in the Basin. 5. For the regional modeling runs described on pages 3 and 4, it would be useful to provide a short comparison table or summaries of the 2021 on-the-books and pollution control scenarios (referred to as Scenarios 1 through 3 in the text) to allow the reader to more easily compare and contrast the major differences in these scenarios. 6. For the regional modeling runs described on pages 3 and 4, it would be useful to provide a short comparison table or summaries of the 2021 on-the-books and pollution control scenarios (referred to as Scenarios 1	1-14: These are generally technical questions related to the previous modeling and are not appropriate discussion points for a guidance document, with the exceptions below: 1-14: Description of the previous ARMS modeling has been removed as it distracts from the air resource strategy discussion. The document will be updated to direct the reader to the ARMS modeling reports for further information and provide references. 14. Project-specific incremental impacts are not the only impact BLM is required to analyze in NEPA. Cumulative impacts are an important component of an adequate NEPA analysis, and as such BLM must analyze, to the extent possible, how its activities and authorizations may impact things such as nonattainment or regional haze. BLM conducts these analyses to disclose potential impacts, and to help guide management and mitigation decisions. BLM relies on the appropriate regulatory agencies to determine how compliance will be measured and achieved.

through 3 in the text) to allow the reader to more easily compare and contrast the major differences in these scenarios. 7. ARMS text on Pages 4 and 5: "There are seven monitoring stations within the 4-km domain with daily PM2.5 concentrations that exceed the NAAQS and state AAQS during the baseline. All future model scenarios predict that only one of these monitoring station would continue to exceed the NAAQS and state AAQS." Comment: We recommend including which monitoring site continues to exceed and state whether the site is in the PM2.5 nonattainment area and provide any available information on the major contributing sources to the continued exceedance. Also note a typographic error – "station" should be "stations." 8. ARMS text on Page 5: "It is predicted that under mitigation Scenario 3, the annual PM2.5 impacts would decrease in the Uinta Basin relative to the baseline due to a reduction of combustion control measures." Comment: This statement seems to be contradictory. We would expect a decrease in pollutant concentrations due to a reduction of combustion *emissions* resulting from *increased* (not decreased) control measures. 9. No summary is provided of the three control strategies in the ARMS modeling 10. Helpful to concisely summarize how the results are being used to inform mitigation strategies and refer to the 2014 modeling report for more information on the modeling study. 11. Page 4 recommend revising statements regarding disbenefits associated with reducing NOx for the following reasons 1) the statement is prematurely conclusive regarding the impact of NOx reductions in the region. The Uinta Basin Ozone Study suggests both NOx and VOC reductions would be effective at reducing ozone formation. NOx reductions will also be necessary to bring the area back into attainment.	

2) NOX emissions cause nitrogen deposition impacts. The emissions can have substantial impacts on downwind Class I and Class II areas. Recommend that the reduction of NOx emissions from O&G development be added as a priority in the Uinta Basin to meet the documents stated objective of ensuring that air quality related values in Class I and Class II areas are not adversely impacted. 12. Page 5 – suggests that having fewer combustion control measures on emission sources would reduce concentrations of PM in the Uinta Basin, which seems unlikely. Recommend deleting, clarifying, or correcting this statement. 13. We question the sufficiency of any baseline that can be realistically constructed. For many activities, including OHV recreation, we now operate in realm of designated routes/areas and carefully regulated technology, in comparison to a history comparatively lacking in regulation or relevant data. See, e.g., ARMS at 5 ("future year scenarios generally have lower NO2, CO, SO2, PM2.5, and PM10 concentrations that the 2010 Typical Year scenario, except for areas within the Uinta Basin."). The attempt to create a present day "baseline" will fail to capture the marked improvement that has already occurred in comparison to a virtually unregulated prior history. It makes more sense to evaluate future projects based on an initial determination of whether they create new impacts/exceedances in a pollutant(s), rather than some finding that an exceedance is occurring. 14. The discussion of "airshed management" at pages 3-5 of the draft ARMS hints at these concerns. The discussion starts from a proper recognition that the focus should be on "potential effects of BLM projects, programs, and activities…." ARMS at 3. In other words, the focus should be on the documented incremental effect of a project-level decision or activity, rather than some overall determination of nonattainment. It is critical that there be a basis to allocate contribution by project or activity in determining the appropriate response to any possible issue. The ensuing	

discussion of Uinta Basin modeling only amplifies our concerns. This discussion suggests that ozone exceedances in this area are essentially unavoidable, and that "mitigation scenarios" will have minimal effects. This discussion only hints at but largely fails to address the inherent connection between VOC and NOx management, which might be utilized as part of holistic management strategy. The present discussion is headed on a trajectory that will only hamstring BLM in future management efforts.	
ARMS Modeling Update 1. Page 5, first paragraph in Regional Modeling – ARMS update section…"periodic updates" to refine / update modeling is part of the adaptive management strategy…strongly suggest the next ARMS modeling to consider having source groups for just Federal emissions sources and for different geographic areas (Planning Areas) to inform what is really driving the potential air quality issues and if BLM source only are predicted to be a significant contribution 2. Page 7, Modeling Analysis…might consider developing a near-field impacts tool based on the Regional analysis (ARMS) and / or a table with distance to receptor and emissions relationships to screen projects. 3. Comment: Utah does not appear to have a "Price County." The City of Price is located in Carbon County. Also, is there any value in including other additional counties that could include energy development so that the model platform provides more utility to planning efforts currently underway or planned moving forward, such as San Juan, Kane, Garfield, Wayne Emery and Grand Counties? 4. While we understand that the BLM is a Cooperator of the Western State Air Quality Study (WAQS) and is aware of the air quality modeling products available on the Intermountain-West Data Warehouse (IWDW), we recommend the BLM consider the IWDW-WAQS products and	1-17. These are technical questions related to potential model updates and this section distracts from the air strategy discussion in the ARMS document. A technical discussion about potential modeling approaches should be discussed with the AiRTAG. Updated the document to discuss regional modeling more generally, with the exception below 4. Edit made. Include in the ARMS update. 5. Comment noted. BLM believes that all prior authorizations have complied with all applicable air quality regulations. Determining how compliance with federal and state standards is to be achieved is a function of those agencies, not BLM. The BLM is required to comply with the Clean Air Act and state regulations. Modeling updates and protocol may be discussed with AiRTAG. 7. Comment noted.

consider adding a discussion of whether the regional modeling on page 5 will utilize the IWDW-WAQS products. 5. Thus, the previous modeling underscores the need for BLM to continue to update and refine the modeling, and to use modeling and other tools to determine how to achieve and maintain compliance of all federal and state standards. Given BLM's failure to provide for compliance with the NAAQS, it must use the ARMS modeling to determine what mitigation—including air pollution control measures, phased-development, offsets, or other measures—are necessary to ensure compliance. 6. Although BLM states that it will update the base year emissions inventory, it does not commit to a specific deadline for doing so. Subject to available funding, the Settlement requires BLM to update the inventory within 2 years. But given the recent nonattainment designation, BLM should proceed as quickly as possible… BLM should update these inventories every three years, at a minimum. 7. Pursuant to the Settlement, BLM should make clear in the ARMS that the emission inventory will include an estimation of greenhouse gas emissions in addition to criteria and other regulated air pollutants. Settlement ¶ 29(b). 8. BLM should also update the reasonably foreseeable development (RFD) scenario at least every three years. 9. BLM should also commit to update the photochemical grid modeling based on periodic updates to the emission inventory and RFD. 10. BLM should work closely with the Air Resource Technical Advisory Group (AiRTAG) to define the modeling protocol. 11. BLM must include source apportionment analysis for the cumulative modeling in order to be able to identify source category impacts. See	8, 9. Updates to any analysis are conducted based on need, appropriateness, and available funding. 15. It is the State and other regulatory agencies responsibility to use modeling to evaluate how a nonattainment area can meet the NAAQS standard. Modeling performed by the BLM is to inform decision makers of the potential direct, indirect, and cumulative impacts from actions occurring on lands managed by the BLM. 16. Comment noted.

Williams Review 2-3. BLM conducted source apportionment analyses in the original CARMMS and its two subsequent updates, and there is no reason it should not employ the same procedures in Utah. 12. BLM must commit to periodic updates to its modeling analysis consistent with EPA's Guideline on Air Quality Models (40 C.F.R. Part 51, Appendix W). This 2018 draft update to the ARMS removes the ongoing, periodic commitment in the 2011 ARMS to review and update the emission inventory and development projections every three years (2011 ARMS at 5). Instead, the 2018 ARMS update commits only to update the base year inventory (one time), "and will expand the inventory to include Price County." (2018 ARMS at 5). Presumably BLM intends to expand the inventory to include the areas within the Price Field Office but BLM should clarify the expanded scope and it must also continue to commit to periodic updates to the inventory every three years, at the very least… BLM must also commit to modeling based on the new inventory. 13. In addition to committing to a sensitivity analysis, BLM should also explicitly commit to evaluating and reporting on model performance compared to goals that are identified in advance and approved by the AiRTAG. 14. Include in the 2018 ARMS … source apportionment analyses for the cumulative modeling in order for stakeholders to be able to identify source category impacts 15. BLM must also clearly identify the specific control measures assumed in the ARMS modeling update. BLM's 2011 ARMS cumulative modeling assumed a set of specific controls applied uniformly to all oil and gas operations subject to BLM authorization. No such assumptions are assessed or supported in BLM's 2018 ARMS update. Given … recently designated the Uinta Basin nonattainment … the modeling analysis performed under the ARMS will be a critical tool for determining the extent of the mitigation measures needed to attain the standard	

16. BLM should better define what would trigger a project-specific modeling analysis… specifically define – with input from the AiRTAG – what constitutes a "substantial increase" in emissions and should consider using EPA's Tribal minor NSR thresholds, which vary by pollutant and attainment status, as a guide. 17. Page 5 – suggest revising the last sentence in the ARMS update section to read "… (AiRTAG), with the work products available for public review, including review of the emissions inventories, modeling protocols, performance evaluation and presentation of results.	
Air Resource Technical Advisory Group (AiRTAG) 1. Page 6, Air Resource Technical Advisory Group…note that in Colorado, we seldom meet with Group for EAs just EISs for specific projects / plans…however, we meet occasionally to present CARMMS (developed outside of specific NEPA project), our CARPP (overall Protocol), and other air resource related tools describing that we will be following these methodologies and using these tools / modeling analyses for future NEPA assessments…allows the Group to see how we are completing EAs (they can comment at this time and we don't always respond to everything) and provides them information before we conduct larger EIS' so that when we do have EIS, the Group has likely already seen our Regional Modeling Study, tools and methodologies already and then the focus is on the specific proposed project / plan. 2. One thing to keep in mind: BLM, as the lead agency has the final decision on all aspects of the air resource analysis, regardless of what the AiRTAG thinks although major differences have been very few and far between. 3. We recommend the list of MOU signatory agencies on page 6, paragraph 2 include the Fish and Wildlife Service (FWS).	1. Comment noted. 2. Comment noted. 3. Edit to include Fish and Wildlife Service. 4. Edit incorporated into ARMS. 5. The two emission inventory reviews are for different purposes, though use a common concept (substantial increase). If an adaptive management clause requires review of emission inventory assumptions - then there needs to be a way to do that and evaluate what it means. Should be done same way as the initial emissions inventory. This probably does not need explained in the guidance. 6. Comment noted, agree with consultation with AiRTAG when appropriate.

4. On page 6, in list of things to work on with the AiRTAG, we recommend including emission inventories prior to letter *b.*, so that it is clearer that the emission inventory collaboration should precede decisions on the impact assessment methodology (currently listed as letter *b.*). Alternatively, it may be appropriate to list emission inventories as the first example of the impact assessment methodology that will be shared and worked on with the AiRTAG. 5. ARMS text on Page 6: "In addition to the above tasks, the AiRTAG will review any annual project-specific emissions inventories prepared pursuant to adaptive management strategies required by project-specific NEPA and provide recommendations on whether a "substantial increase" in emission has occurred, and what appropriate enhanced mitigation may be required to address any emission increases." Comment: This clause seems to merge two different ideas. Discussions and determinations of substantial emissions needs to be completed in order to inform the level of analysis that will be prepared for a DEIS. Alternatively, the annual project specific inventories prepared pursuant to adaptive management strategies already have metrics established for acceptable emission profiles (e.g., net zero stationary source VOC emissions). Therefore, it is unclear what the intention of this clause is and how best to recommend edits to address the BLM's desired intent. We recommend discussion of this language with the AiRTAG. 6. It is critical that BLM work closely with the Utah Air Resource Technical Advisory Group (AiRTAG) – as indicated in the 2018 ARMS update (p. 6) – to determine and clearly define specific elements of the modeling protocol, such as the details of the modeling scenarios, control assumptions, operating hours, etc.	7. These are typical review items for the AiRTAG, and will be added. 8. Comment noted.

7. Page 6 – Recommend adding to the a-f list the following. Emissions inventories and inventory assumptions, modeling protocols, model performance evaluations and reports summarizing modeling results. 8. Page 6- we encourage involvement of the AiRTAG and other stakeholders, in properly evaluating the stated factors including the baseline assessment, project-specific emissions, and "whether a 'substantial increase' in emission has occurred…."	
Significance Levels 1. Page 6, Air Resource Technical Advisory Group…note that over the past couple of years, we have met with the Workgroup on several occasions to discuss "significance levels" for Planning / Leasing –level analyses…we have full cumulative impact thresholds (NAAQS, critical deposition loads, etc.) and we have project-level impact thresholds (SILs, DATs, etc.) but we don't have significance impact thresholds for Planning Areas (groups of Lease Parcels) that are not full cumulative and would be made up of multiple proposed actions / projects. It appears that NPS understands what BLM needs and has requested information (CARMMS 2.0, etc.) from us for developing significance impact criteria information. 2. Page 9, #4…see previous comment about working with NPS to develop significance impact criteria for Planning Areas (groups of project-level emissions sources).	1-2. Edit made. Reference MOU Group as a source for significance levels.
Emissions Inventories 1. Page 6, Air Resource Technical Advisory Group…one more thing for the Group…there has been a request from members of the Group to streamline the emissions inventories that are developed for their review of NEPA analyses…see email from Theresa. 2. We recommend the list of available sources of emission factors on page 7 include manufacturer specifications or emission data, and stack testing	1-2. Noted. Technical comment related to emission inventory development, does not need to be in guidance. 3. BLM disagrees and uses EI when sufficient information regarding development is available.

data in addition to the current list, which includes AP-42 emission factors. Generally, information specific to the equipment has a higher level of confidence than emission factors in AP-42, which are intended for calculation of annual emission profiles. 3. Emission inventories should not be limited to oil and gas projects where "an RFD number of wells is defined	
NEPA 1. Page 9, #5…consider incorporating by reference (IBR) information to streamline and cut-down size of NEPA write-ups 2. ARMS text on Page 8: "A "substantial increase in emissions" for purposes of criteria a. *Emissions/Impacts* is a level of emissions that can be reasonably applied to a recognized modeling analysis methodology and be expected to show adverse impacts based on that modeling analysis. Considerations that may be used to determine this include New Source Review analysis threshold limits, Prevention of Significant Determination significance levels, demonstration of impacts from previous modeling analyses, regulatory permit emission thresholds, and professional judgement." Comment: This definition does not match the definition of substantial increase defined in the National Oil and Gas MOU. We recommend that the definition match. The definition provided in the revision to ARMS introduces several issues that have not been discussed with the AiRTAG and were not agreed to through the MOU. We do not recommend identifying NSR/PSD (note typo in ARMS text, "Determination" should be "Deterioration") thresholds or Significant Impact Levels (SILS) as appropriate measures for determining substantial emissions (in all cases). Although there may be instances where they may be informative, identification of these as metrics for determining substantial emission in this document may not align with the intent of the MOU in all circumstances. Additionally, the idea that a level of emissions could be expected to show adverse impacts may be difficult to	1. Edited ARMS to include. 2. Comment noted; no change made to the document. 3. Comment noted. 4. At the present time GHG's are considered "air quality" in that they are identified by EPA as a regulated air pollutant. There is no need to specifically identify every pollutant covered under this statement. 5. Edit made. A statement was added clarifying that general conformity regulations will be performed for actions in designated nonattainment areas. However, general conformity is a mandated under the Clean Air Act, and is not required for inclusion in the NEPA process. 6. Setting specific triggers for analysis is not consistent with NEPA's project-specific focus to the commenter's suggestion would require rulemaking and thus is infeasible in a

document and come to agreement on in practice since the level at which an adverse impact may be realized is highly dependent on case specific considerations. Therefore, we recommend the definition align with the National Oil and Gas MOU (see MOU page 7).	policy document. Standards other than NAAQS or PSD increments for triggers may be implemented if required by appropriate regulatory agencies.
3. Pursuant to the Settlement, the ARMS must "[d]escribe how BLM will, in future NEPA processes, identify reasonable mitigation and control measures and design features to address adverse impacts to air quality or [AQRVs] on all affected public lands and reduce greenhouse gas emissions when those measures are reasonable and consistent with relevant BLM statutory authorities and polices and lease rights and obligations." Settlement ¶ 29(a).	7. The BLM has made all relevant information related to NEPA actions available for public review.
4. BLM states that "a commitment that the analysis of air quality and AQRVs impacts will be done in accordance with current technical standards, guidance, and practices can be applied to all future NEPA analysis without reservation." But there is no mention of greenhouse gas emissions.	8. This specific language is from the national MOU and BLM is aware of it but does not believe this language should be added to the Utah ARMS. 9. Comment noted, Q/d removed.
5. BLM must also factor the recent nonattainment designation into its NEPA procedures, recognizing that more is required before authorizing projects in this area… determine through modeling the mitigation measures necessary to come into compliance…analyze and apply those mitigation measures through the NEPA process. Absent such analysis, BLM must implement offsets of greater than 1:1 to ensure that VOC emissions do not increase in the nonattainment area. At a bare minimum, BLM should define and consistently update minimum mitigation measures that apply to all projects approved within the nonattainment area based on reasonable controls that are utilized in other states… BLM should not rely solely on adaptive management for any projects within the nonattainment area.	10. Comparison to PSD is for informational purposes only with respect to Class I areas. 11. Model selection will always be a project-specific decision consistent with NEPA practice. What is appropriate for a regulatory determination (which BLM does not do) may or may not be appropriate for a NEPA analysis. EPA codified guidance for model use by regulatory agencies is only generally applicable to NEPA analysis. When appropriate BLM will discuss deviations from EPA guidance for NEPA analysis with AiRTAG. 12. Comment noted.
6. BLM's triggers for modeling analyses are unworkably vague and should be refined (e.g., "substantial increase in emissions")… must identify	13. Comment noted.

specific triggers as well as required mitigation once the triggers have been met. These triggers should occur at levels below the NAAQS standards. 7. ensure that the recommendations of the AiRTAG with respect to NEPA analysis and mitigation are transparent and available for public review and scrutiny… there is no commitment to make these emission inventories or the recommendations regarding enhanced mitigation public, defeating one of NEPA's key purposes. 8. Page 7-8 Recommend revising the paragraph starting as A "substantial increase in emissions" to the following. A "substantial increase in emissions" for purpose of criteria a. Emissions/Impacts is a level of emissions that can be reasonably applied to a recognized modeling analysis methodology and be expected to show adverse impacts based on the action alone or the cumulative impacts of the action in conjunction with all current and reasonably foreseeable future actions. 9. Page 8 – Please remove the reference to the Q/d ratio for this section and revise it to clarify that 'Proximity to a Class I or sensitive Class II Area" will be determined on a case-by-case basis in consultation with the applicable federal land manager. The Q/d ration may not always be appropriate for large groups of dispersed sources such as those found in oil and gas development projects. 10. Page 9 – Recommend including that model results will also be compared to Class II increments as the Clean Air Act also aims to protect increments in Class II areas. 11. In the far field modeling section the document indicates that CALPUFF and SCIPUF models are available for use. EPA in 2017 updated guidance and determined that CALPUFF is no longer a preferred model and considers it a screening technique to be used in consultation with the appropriate reviewing authority. The EPA defers to the federal land	14. Comment noted. Nonbinding guidance is just that. ARMS is intended to assist Utah BLM staff analyze and disclose impacts to air quality. It is not a regulatory document and this is not binding on BLM or the public. 15. Comment noted. Substantial, and any other "threshold" is always project-specific when looking at NEPA and based on analyzed or potential impacts. ARMS guidance does not, and is not intended to, set universal regulatory or threshold standards. 16. Comment noted. The document will be reviewed to make sure the language is consistent with this clarification. 17. Comment noted, same as 16.

managers when using this model for AQRV analysis purposes. SCIPUFF is considered an "alternative" model that can be used in regulatory applications on a case-by-case basis when approved by the reviewing authority. Suggest revising discussion on how BLM would use these models (ie in consultation with AiRTAG). Guidance in ARMS should be consistent with guidance issued by EPA for regulatory purposes. 12. ARMS hint at … overstate BLM's role. For example, the document accurately quotes a portion of the Council on Environmental Quality NEPA regulations including language that BLM should aspire to "take actions that protect, restore, and enhance the environment." ARMS at 5 (quoting 40 C.F.R. § 1500.1(c)). This implies that NEPA imposes some substantive duty to protect, restore or enhance. A more accurate characterization should state that NEPA is a purely procedural statute emphasizing public disclosure of significant effects to the human environment to facilitate informed decision-making. 42 U.S.C. § 4321; 40 C.F.R. § 1502.1. NEPA is silent on the substance of agency decisions and does not require that agencies reach any particular result. Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989). The ARMS should be more cautious and make clear that BLM is erring on the side of procedural caution in even speaking to air quality issues primarily within the jurisdiction of other agencies. 13. a federal agency cannot be forced to take action except upon "a discrete action that it is required to take." Id. at 64 (italics in original). Relatedly, if BLM suggest through the ARMS that it "shall" or even "will" undertake certain analyses, make certain findings, or include certain components, it will fuel an argument, however misplaced, that when BLM overlooks said actions it has somehow violated NEPA or other law. In creating nonbinding guidance BLM should make sure it is not binding itself to any procedural requirement that might be used as a weapon by future project opponents.	

14. Page 5-6- as discussed above, the NEPA discussion should more closely track governing statutes and controlling judicial precedent, and downplay the role of nonbinding guidance. 15. Page 7- the "modeling analysis" discussion reflects our general concern that the agency is implying specific duties/standards that it will fail to achieve in some future project(s). There is some latitude in the stated analysis triggers, but they could be improved. Under (a), the "substantial increase in emissions" needs to be better clarified, e.g. that a substantial increase must be in the overall emissions for a pollutant within the project area. The criteria in (a) need to be connected to the geographical definition of locations in (b). 16. Page 9 – there are several examples where BLM has unnecessarily limited its flexibility and discretion. For example, instead of saying BLM "will include the following components and procedures in air resource NEPA analysis" it would make sense to say BLM will "consider" those elements. Similarly, BLM has opened itself to the argument it has committed to specific process/components when it says it "will" act as stated in items 3 and 5 on that list. 17. Page 10 – similarly, the language should build discretionary space, such as in the first sentence by saying BLM " will consider…" specified topics. Similarly, the last sentence of the opening paragraph might say – "Where applicable, BLM will discuss appropriate mitigation measures to reduce or eliminate adverse impacts to AQRVs identified in the NEPA process." We suggest this as an example of the type of refinement that should occur throughout the document to protect BLM's decision space and limit the unforeseen application of this guidance as a weapon against future project-specific actions.	
Mitigation 1. Page 10, Mitigation…important to understand BLM contribution only and what is the net effect of the BLM proposed action (would the impact	1. Comment noted.

happen anyway? If not, are we a significant contribution? If so, what is the "best bang for the buck" for providing additional air resource protection?)	2. Comment noted. May considered on a case by case basis as exceedances could have localized impacts.
2. Modeled exceedances don't need mitigation as they are not violations.	3. This is not appropriate to include. Setting "base levels of controls" is a regulatory function, not a NEPA or FLPMA function. In addition, it would be expected that this list would change over time (ala BACT), so would need constant supervision and revisions. Best to keep it general (i.e. BMP) for a general guidance document.
3. The ARMS update does not include the base level of controls that were included in the 2011 document. We recommend that those "Minimum Air Pollution Controls for Oil and Gas Operations" be carried forward in this version of ARMS or a discussion be included for why it is not necessary to carry forward those commitments.	4. This would be setting a general source rule, which would require rulemaking and could not be implemented through a general guidance document. The Waste Prevention Rule is under judicial review and in process of being revised. It would be premature to include it in ARMS at this time.
4. BLM should also consider the demonstrated, cost-effective measures for gas capture and leak detection and repair from its Waste Prevention Rule for new and existing oil and gas facilities on federal or tribal lands and EPA's New Source Performance Standards for the Oil and Natural Gas Sector.	5. The BLM activities in a nonattainment area, including determining appropriate control levels, is a function of the regulatory agencies, which the BLM is obligated to comply with under the General Conformity rule. BLM has no authority to establish its own level of control in that regard. Specific minimum mitigation commitments for nonattainment areas are established by the State and/or Tribe to include in implementation plans and rules/regulations. Additional mitigation measures may be established on a case by case basis with
5. For the nonattainment area, BLM should incorporate a commitment to require specific minimum oil and gas mitigations and consideration of additional enhanced mitigations in the 2018 ARMS update based on the most recent demonstrated technologies	
6. BLM should include a commitment in the 2018 ARMS update to periodically reviewing and revising the list of minimum required controls and enhanced mitigation measures every three years based on a review of currently-available cost-effective controls. This process of updating the minimum controls should include input from the AiRTAG.	

7. We recommend that ARMS list potential methods that may be used to retain the ability to add mitigation after a project has been approved, such as the inclusion of lease stipulations that specifically provide for flexibility in requiring additional controls that could be applied to new or existing equipment.	project proponents after determining what mitigation strategies work best for their activity. 6. Establishing a minimum level of control applicable to all sources *a priori* is establishing an air pollution regulation, which the BLM has no authority to do. See response 3 and 5. 7. This is in essence adaptive management, which the ARMS guidance recognizes as an integral part of air resource management.
Adaptive Management 1. Page 10, Adaptive Management…the overall adaptive management concept is part of the back-bone for BLM Colorado planning / leasing - level analyses as we discuss that future air quality impacts analyses for specific proposed actions will be conducted based on the conditions at that time, and not speculate too much about what those future conditions would be. 2. At a minimum, the 2018 Update must include specific adaptive management commitments that were include in the 2011 ARMS, such as triennial review of emission inventories, regional modeling commitments for new projects, and air monitoring. See Williams Review 5. 3. The adaptive management commitments that were in the 2011 ARMS are not included in the 2018 ARMS update and should be. These important commitments are needed in order to ensure BLM is managing air quality consistent with current policy guidance and scientific methods (e.g., for estimating emissions and for modeling impacts).	1. Comment noted 2. Adaptive management, EI review, air monitoring, and other post-authorization activities are all project-specific based on the proposed action and potential impacts. Establishing adaptive management commitments in a strategy document is inappropriate and contrary to established NEPA practice. 3. The 2018 ARMS has been updated to more clearly define how adaptive management works under NEPA. 4. See 2 5. See 2 6. See 2

4. BLM's adaptive management process must require frequent and specific actions are taken in order to prevent significant impacts (as opposed to simply taking corrective action after a significant impact is identified) 5. Without specific triggers for further specific action, the BLM's management plans cannot function as an adaptive tool to ensure mitigation measures are appropriate to prevent significant adverse impacts to air quality. 6. BLM must commit to an adaptive management strategy within the nonattainment area that is coupled with a commitment to a periodic modeling analysis to establish specific, enforceable mitigations measures – including offsetting any increases in emissions from new development with a greater decrease in emissions from sources impacting the nonattainment area – to be implemented prior to authorizing any future development.	
Air Monitoring 1. BLM should work with the State and EPA to expand monitoring in the State and should ensure that monitoring data are made available to the public. 2. BLM is approving drilling or other development in areas without adequate monitors, the agency should require as part of its leases or permit approvals that operators collect quality-assured monitoring data in accordance with EPA and State data quality criteria and make the data available to the agency and the public. 3. BLM should require operators to collect quality-assured monitoring data in accordance with EPA and State data quality criteria and make the data	1. Comment noted. The BLM has and will continue to pursue these partnerships. 2. Air monitoring for regulatory compliance is not a function of the BLM. BLM works with the appropriate agencies to assist in insuring adequate monitoring, and will continue to do so. 3. It is inappropriate to require specific monitoring protocols in a strategy document. Monitoring requirements will be coordinated and applied by the appropriate regulatory or authorizing entity.

available to the public for areas where development is occurring and there are not adequate monitors. 4. Establishment of a more comprehensive monitoring network will help serve as a backstop to track and ensure air quality protection throughout the State and to help identify areas of concern with regard to air impacts. 5. Page 11-12 – we applaud the recognition that BLM has a limited role in the air quality monitoring/management, and would encourage an effort to streamline and simplify the ARMS in recognition of that fundamental theme.	4. Comment noted. 5. Comment noted.
Public Education and Awareness 1. Page 12, Public Education and Awareness…in the future (hopefully soon), BLM Air Resources Toolkit will be big source where the Public can go to access reports and information 2. Annual Air Resource Reports. The first such report is to cover the time period between the adoption of the 2011 ARMS and the present day. Settlement ¶ 29(c). 3. ARMS should include adequate public participation opportunities. This should include a timeframe of at least 30 days for the public to review ARMS work products and actions. Important public notification and participation provisions of the 2018 draft ARMS include: (1) the continued commitment to make the ARMS Modeling work products available for public review (p. 5); and (2) the commitment to produce an annual report on air resource issues that is made available to the public (p. 12).	1. Comment noted. 2. Comment noted. 3. ARMS is a guidance document, and is not intended to be either NEPA or rulemaking, and as such public review is not automatically incorporated into ARMS.

Grammatical 1. Page 5 2nd paragraph. Change Price County to Carbon County 2. "Price County," but presumably—pursuant to the Settlement—BLM means the Price Field Office	Edit made, changed Price County to Carbon County.
Class I Areas 1. Page 8 - "Proximity to a Class I or sensitive Class II Area" may be determined by comparing projected emissions to the FLAG 2010 Q/d ratio for screening of projects..." - Tim Allen, FWS Modeler, has repeatedly stated that Q/d is likely not appropriate for oil and gas development with multiple, low level emissions points; 2. ARMS text on Page 8: "'Proximity to a Class I or sensitive Class II Area' may be determined by comparing projected emissions to the FLAG 2010 Q/d ratio for screening of projects with the potential for adverse AQRV impacts." Comment: There may be instances where it is appropriate to use the Q/d screening approach, however it may not be as informative as was intended if used for area sources. The FLAG approach was developed for point sources for which dispersion characteristics may greatly differ from distributed area sources often associated with energy development. We recommend that the BLM coordinate with the Federal Land Managers (FLMs) and the AiRTAG when determining whether project impacts to AQRVs warrant further evaluation. Simply utilizing Q/d for a determination that a project is "proximal" may not align with the intent of the National Oil and Gas MOU and may limit the implementation of the MOU.	1-2. Comments noted.
Reference Section 1. UDAQ in telephone conversation recommended adding a reference section, to include documentation about the 2014 ARMS modeling, the National MOU, and other references.	1. Edit to include reference section

Acronym 1. The text references the “MATS tool” twice on page 4 (in the third and fifth paragraphs), but this acronym is not defined and a description of what the tool does is given on the second use of the term rather than the first. We recommend defining the acronym and moving the short description of the MATS tool (“which accounts for model performance biases”) to the first instance the tool is referenced.	1. This language had been removed from the final version.